



- 1 -

SEQUENCE LISTING

Yokoyama, Shigeyuki
Hirao, Ichiro
Sakamoto, Kensaku

<120> Nucleic Acid Capable of Binding Specifically to Ras Target Protein

<130> 49651 (71526)

<140> 09/529,397

<141> 2000-09-26

<150> PCT/JP/04399

<151> 1999-08-13

<150> 10-333284/1998

<151> 1998-11-24

<150> 10-242596/1998

<151> 1998-08-14

<160> 66

<170> PatentIn version 3.2

<210> 1

<211> 108

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 1

gggagaucag aaauaacgcu caacugauca auggcguaca auggauucgu ucucuaaacc 60

aaaacccuua ccccuuggac ugauucgaca ugaggccccc gcagggcg 108

<210> 2

<211> 107

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 2

gggagaucag aaauaacgcu caacugauca auggcguaca auggauucgu ucucuaaacc 60

aaaacccuua ccccuuggacu gauucgacau gagggccccc cagggcg 107

- 2 -

<210> 3
<211> 108
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 3
gggagaucag aa metaaacgcu caacugauca auggcguaca auggauucgu ucuc metaaacc 60
aaaacccuua ccccuuggac ugc uucgaca ugaggccccc gcagggcg 108

<210> 4
<211> 108
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 4
gggagaucag aa metaaacgcu caacugauca auggcguaca auggauucgc ucuc metaaacc 60
aaaacccuua ccccuuggac ugc uucgaca ugaggccccc gcagggcg 108

<210> 5
<211> 108
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 5
gggagaucag aa metaaacgcu caacugauca auggcguaca auggauucgu ucuc metaaacc 60
aaaacccuua cuccuuggac ugc uucgaca ugaggccccc gcagggcg 108

<210> 6
<211> 108
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 6
gggagaucag aa metaaacgcu caacugauca auggcguaca auggauucgu ucuc metaaacc 60
aaaacccuua ccccuuggac uguuucgaca ugaggccccc gcagggcg 108

- 3 -

<210> 7
<211> 108
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 7
gggagaucag aaauaacgcu caauugacuc aauggcguac aauggauucg uucucauaac 60
caaaacccuu accccuugga cuguucgaca ugaggccccc gcagggcg 108

<210> 8
<211> 108
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 8
gggagaucag aaauaacgcu caauugaaga ucguacaaug gauucgauca uaacccgaag 60
uuuuuaaaca cucuuuaccu guauucgaca ugaggccccc gcagggcg 108

<210> 9
<211> 108
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 9
gggagaucag aaauaacgcu caaucgaguc cacgaacauu acauuuuga acacuucagc 60
accgaacaug cuuaguacua uccuucgaca ugaggccccc gcagggcg 108

<210> 10
<211> 108
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 10
gggagaucag aaauaacgcu caauuuuacc auagccuuga gguaaacaau uuagcacacc 60
ugaauacag aacuaugaac ucauucgaca ugaggccccc gcagggcg 108

- 4 -

<210> 11
 <211> 107
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 11
 gggagaucag aaauaacgcu caacuugagc caauuaaaag auuuacaaca agaacaugaa 60
 cgugacagcg auaauauac gauucgacau gaggccccug cagggcg 107

<210> 12
 <211> 108
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 12
 gggagaucag aaauaacgcu caagcgacaa gcagcagaua aaguugagcg caacgccgcu 60
 acagaaccaa auuaacaugu auguucgaca ugaggccccc gcagggcg 108

<210> 13
 <211> 107
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 13
 gggagaucag aaauaacgcu caaucgaaag uaaguccgau acaacacaua accuauuuuu 60
 uagcagcgau aaucacaaaua aguucgacau gaggccccug cagggcg 107

<210> 14
 <211> 108
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

- 5 -

<400> 14
 gggagaucag aaauaacgcu caagcaguaa uccacuugua auugaaugua gaugccauau 60
 agaguauua guaauccgaa uuguucgaca ugaggccccc gcagggcg 108

<210> 15
 <211> 108
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 15
 gggagaucag aaauaacgcu caacguagua gcacaccaug accuauuaaa ucugcuucgc 60
 aauguaccuu aacacauaau caguucgaca ugaggccccc gcagggcg 108

<210> 16
 <211> 108
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 16
 gggagaucag aaauaacgcu caagaugac uaauauuac aacagauaac cuuacucuug 60
 aaaaugcuu ugcuuuuggu uaauucgaca ugaggccccc gcagggcg 108

<210> 17
 <211> 108
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 17
 gggagaucag aaauaacgcu caaucuucga aguccaugac ugcaaaacca gauaguccua 60
 aucucaauua ucagucccaa guauucgaca ugaggccccc gcagggcg 108

<210> 18
 <211> 108
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

- 6 -

<400> 18
 gggagaucag aaauaacgcu caaacacucu aaauuguggu acuaagggag uaagggcaac 60
 uacgaagacg ugcaaggaua aaguucgaca ugaggccccc gcagggcg 108

<210> 19
 <211> 107
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 19
 gggagaucag aaauaacgcu caauuugccu cgacggucug cgaauagaac gcgaaccgug 60
 auuaguguac aaggauucgg uuuucgacau gagggcccug cagggcg 107

<210> 20
 <211> 106
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 20
 gggagaucag aaauaacgcu caagucgcag cagaaauauc aucgcaaac cucaauugca 60
 ucucauguau aucuagucca auucgacaug aggccccugc agggcg 106

<210> 21
 <211> 105
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 21
 gggagaucag aaauaacgcu caacgaacau cuggaguaau caucuuaaua accucauuua 60
 ccuuuacacu uucuaaacua uucgacauga ggccccugca gggcg 105

<210> 22
 <211> 108
 <212> RNA
 <213> Artificial

- 7 -

<220>

<223> RNA aptamer

<400> 22

gggagaucag aaauaacgcu caaggguaag ggugagcagu ucaagauggu aacuggcauu 60

cauuugaaga aagguuggua gacuucgaca ugaggccccc gcagggcg 108

<210> 23

<211> 108

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 23

gggagaucag aaauaacgcu caaggguaag ggugagcagu ucaagauggu aaccggcauu 60

cauuugaaga aagguuggua aacuucgaca ugaggccccc gcagggcg 108

<210> 24

<211> 101

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 24

gggagaucag aaauaacgcu caacuuggug uaguguucaa gugagauaua guauaagguu 60

auuguugugc gaacggguucg acaugaggcc ccugcagggc g 101

<210> 25

<211> 100

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 25

gggaguggag gaauucaucg aggcauauu cgacuccguc uuccuucaaa ccaguauaaa 60

auugguuuuu gcuaugccu uagcgacagc aagcuucugc 100

<210> 26

<211> 98

<212> RNA

<213> Artificial

- 8 -

<220>

<223> RNA aptamer

<400> 26

gggaguggag gaauucaucg aggcaugacc ucccugggca guagggguua aaauuauuu 60

ccuacacuuc ucaugccua gcgacagcaa gcuucugc 98

<210> 27

<211> 90

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 27

gggaguggag gaauucaucg aggcauauu cgacuccguc uuccuucaaa ccaguuauaa 60

auugguuuuu gcauauugccu uagcgacagc 90

<210> 28

<211> 80

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 28

gggaguggag gaauucaucg aggcauauu cgacuccguc uuccuucaaa ccaguuauaa 60

auugguuuuu gcauauugccu 80

<210> 29

<211> 60

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 29

cugaucuuu gcuuacuuu gcuuacuuu cauaacuuu accuuuuu cuuggacuga 60

<210> 30

<211> 59

<212> RNA

<213> Artificial

- 9 -

<220>

<223> RNA aptamer

<400> 30

cugaucaaug gcguacaaug gauucguucu cauaaccaaa acccuuaccc cuggacuga 59

<210> 31

<211> 60

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 31

cugaucaaug gcguacaaug gauucguucu cauaaccaaa acccuuaccc cuuggacugc 60

<210> 32

<211> 60

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 32

cugaucaaug gcguacaaug gauucgcucu cauaaccaaa acccuuaccc cuuggacugc 60

<210> 33

<211> 60

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 33

cugaucaaug gcguacaaug gauucguucu cauaaccaaa acccuuacuc cuuggacugc 60

<210> 34

<211> 60

<212> RNA

<213> Artificial

<220>

<223> RNA aptamer

<400> 34

cugaucaaug gcguacaaug gauucguucu cauaaccaaa acccuuaccc cuuggacugu 60

- 10 -

<210> 35
 <211> 60
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 35
 uugacucaau ggcguacaau ggauucguuc ucauaaccaa aacccuuacc ccuuggacug 60

<210> 36
 <211> 60
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 36
 uugaagaucg uacaauggau ucgaucauaa cccgaaguuu uuaaacacuc uuuaaccugua 60

<210> 37
 <211> 60
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 37
 ucgaguccac gaacauuaca uauuugaaca cuucagcacc gaacaugcuu aguacuaucc 60

<210> 38
 <211> 60
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

<400> 38
 uauuaccaua gccuugaggu aaacaauuaa gcacaccuga auacacgaac uaugaacuca 60

<210> 39
 <211> 59
 <212> RNA
 <213> Artificial

<220>
 <223> RNA aptamer

- 11 -

<400> 39
cuugagccaa uuaaaagauu uacaacaaga acaugaacgu gacagcgaua auaauacga 59

<210> 40
<211> 60
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 40
gcgacaagca gcagauaaag uugagcgcaa cgccgcuaca gaaccaaauu acauguaug 60

<210> 41
<211> 59
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 41
ucgaaaguaa guccgauaca acacauaacc uauuauuuag cagcgauau acaauaag 59

<210> 42
<211> 60
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 42
gcaguaaacc acuuguaauu gaauguagau gccauauaga guuauuagua auccgaauug 60

<210> 43
<211> 60
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 43
cguaguagca caccaugacc uauuaaau cuuucgcau guaccuuaac acauaaucag 60

- 12 -

<210> 44
<211> 60
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 44
gaaugacuaa uaaauacaac agauaaccuu acucuugaua aaugcuuugc uuuugguuaa 60

<210> 45
<211> 60
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 45
ucuucgaagu ccaugacugc aaaaccagau aguccuauc ucaauuauca gucccaagua 60

<210> 46
<211> 60
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 46
acacucuaaa uugugguacu aagggaguaa gggcaacuac gaagacgugc aaggauaaag 60

<210> 47
<211> 59
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 47
uuugccucga cggucugcga auagaacgcg aaccgugauu aguguacaag gauucgguu 59

<210> 48
<211> 58
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

- 13 -

<400> 48
gucgcagcag aaauaucauc gcaaaaccuc aaugcaucu cauguauauc uaguccaa 58

<210> 49
<211> 57
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 49
cgaacaucug gaguaaucau cuuaauaacc ucauuuaccu uuacacuuuc uaaacua 57

<210> 50
<211> 60
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 50
ggguaagggg gagcaguuca agaugguaac uggcauucuu uugaagaaag guugguagac 60

<210> 51
<211> 60
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 51
ggguaagggg gagcaguuca agaugguaac cggcauucuu uugaagaaag guugguaaac 60

<210> 52
<211> 53
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 52
cuugguguag uguucaagug agauauagua uaagguuauu guugugcgaa cgg 53

- 14 -

<210> 53
<211> 45
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 53
augucgacuc cgucuuccuu caaaccaguu auaaaauuggu uuuag 45

<210> 54
<211> 45
<212> RNA
<213> Artificial

<220>
<223> RNA aptamer

<400> 54
gaccucccggu ggcaguaggg guaaaaauua ucuuccuaca cuucu 45

<210> 55
<211> 23
<212> RNA
<213> Artificial

<220>
<223> primer for cDNA

<400> 55
gggagaucag aaauaacgcu caa 23

<210> 56
<211> 25
<212> RNA
<213> Artificial

<220>
<223> primer for cDNA

<400> 56
uucgacauga ggccccugca gggcg 25

<210> 57
<211> 50
<212> DNA
<213> Artificial

<220>
<223> PCR primer

- 15 -

<400> 57
gccggaattc taatacgact cactataggg agatcagaat aaacgctcaa 50

<210> 58
<211> 25
<212> DNA
<213> Artificial

<220>
<223> PCR primer

<400> 58
cgccctgcag gggcctcatg tcgaa 25

<210> 59
<211> 45
<212> DNA
<213> Artificial

<220>
<223> PCR primer

<400> 59
ggtaatacga ctactatag ggagtggagg aattcatcga ggcatt 45

<210> 60
<211> 29
<212> DNA
<213> Artificial

<220>
<223> PCR primer

<400> 60
catatgcctt agcgacagca agcttctgc 29

<210> 61
<211> 108
<212> RNA
<213> Artificial

<220>
<223> random RNA pool

<220>
<221> misc_feature
<222> (24)..(83)
<223> n is a, c, g, or t

- 16 -

<400> 61
 gggagaucag aaauaaacgcu caannnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn 60
 nnnnnnnnnnn nnnnnnnnnnn nnnuucgaca ugaggccccc gcagggcg 108

<210> 62
 <211> 25
 <212> DNA
 <213> Artificial

<220>
 <223> primer

<400> 62
 ttcgacatga gggccctgca gggcg 25

<210> 63
 <211> 39
 <212> DNA
 <213> Artificial

<220>
 <223> primer

<400> 63
 ggtaatacga ctactatag ggagtggagg aattcatcg 39

<210> 64
 <211> 24
 <212> DNA
 <213> Artificial

<220>
 <223> primer

<400> 64
 gcagaagctt gctgtcgcta aggc 24

<210> 65
 <211> 26
 <212> DNA
 <213> Artificial

<220>
 <223> primer

<400> 65
 gctgtcgcta aggcataatgc taaaac 26

- 17 -

<210> 66
<211> 27
<212> DNA
<213> Artificial

<220>
<223> primer

<400> 66
aggcatatgc taaaaccaat ttataac

27